

Identification and redescription of the Haitian *Chondropoma semilabre* of Bartsch, 1946, non Lamarck, 1822 (Gastropoda: Annulariidae)

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ABSTRACT

Chondropoma bellavittatum new species is described for the Haitian species referred to by Bartsch, 1946, as *Chondropoma semilabre* Lamarck, 1822. This latter species is shown to be a different taxon from the Bahamas.

INTRODUCTION

Lamarck (1822) briefly described *Cyclostoma semilabris* from an unknown locality, thus launching a convoluted nomenclatorial history for the species involving mis-identifications from numerous authors. Eventually, Pfeiffer (1862) noted the species' great similarity to *Chondropoma hjalmarsoni* Pfeiffer, 1858, from Turks Island, Bahamas [Turks and Caicos Islands], but identified it as a related but distinct species from Crooked Island, Bahamas. Pfeiffer does not mention seeing Lamarck's specimen. Weinland (1880) followed Pfeiffer in considering Lamarck's species as originating from Crooked Island.

Bartsch (1946), in his lengthy discussion of *C. semilabre*, does not mention having seen the type specimen but maintained that it was a Haitian taxon matching specimens at the United States National Museum (now National Museum of Natural History, Smithsonian Institution) from Saint-Marc and Arcahaie. He considered the Crooked Island species to be *Chondropoma glabratum* Reeve, 1863, described from "Bahamas." Reeve attributed the species to Weinland, who however did not describe it.

Mermod's (1952: fig. 109) photograph of the type of *Cyclostoma semilabris*, now at Muséum d'Histoire Naturelle de Genève (unnumbered), confirmed Pfeiffer's assessment that it is conchologically similar to *C. hjalmarsoni*; in fact, it seems identical to *Chondropoma*

hjalmarsoni salinum Bartsch, 1946, which is not from Crooked Island but from Salt Cay in the Turks and Caicos Islands group. The type is also similar to *Chondropoma glabratum* Reeve, 1863. Although Bartsch identified Reeve's species as the Crooked Island taxon, it is actually more similar to the Salt Cay species, and may be a junior synonym of *C. semilabris*. This problem remains to be resolved. Either way, neither the Crooked Island nor the Salt Cay species is the Haitian taxon identified as *C. semilabre* by Bartsch, which leaves Bartsch's species without a valid name. This new species is described below.

SYSTEMATICS

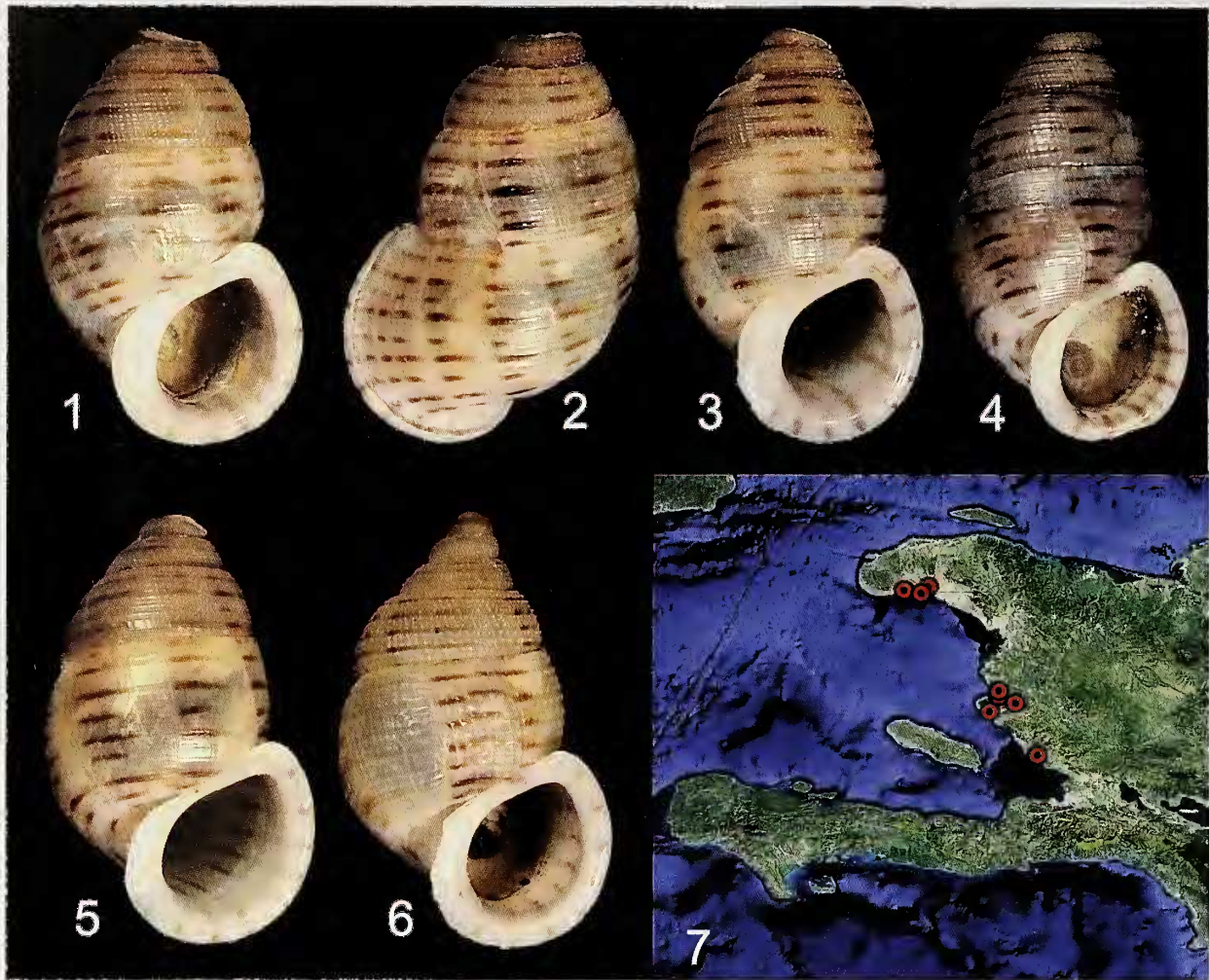
Family Annulariidae Henderson and Bartsch, 1920

Genus *Chondropoma* Pfeiffer, 1847

Type Species: *Cyclostoma sagra* d'Orbigny, 1842, by subsequent designation of Petit de la Saussaye, 1850.

Chondropoma bellavittatum new species (Figures 1–7)

Description: Shell thin but solid, opaque, obese. Maximum adult size: 17.6 mm maximum length, including peristome, decollate. Minimum adult size: 12.9 mm maximum length, including peristome, decollate. Shell usually decollated even at juvenile stage. Protoconch of 1.5 minute, smooth, rounded whorls, pale tan, demarcation between protoconch and teleoconch not well-defined. Teleoconch of 4.75 whorls. Primary axial sculpture on final whorl very fine and close-set, but irregular and nearly obsolete except for widely spaced growth stoppage marks. Axial sculpture on earlier teleoconch whorls of very fine, closely spaced, numerous threads (ca. 80/whorl). Spiral sculpture on final whorl (including umbilicus) of ca. 30–35 very fine, very widely spaced, raised threads. Intersections of axial and spiral sculpture forming microscopic raised beads. Suture



Figures 1–7. *Chondropoma bellavittatum* new species. 1–2. Holotype, UF 33135, 12.9 mm length. 3. Paratype 1, UF 33135, 15.4 mm length. 4. Paratype 2, UF 33135, 16.5 mm length. 5. Paratype 3, UF 33135, 14.2 mm length. 6. UF 33104, 5 km WNW of Anse-Rouge, Department Artibonite, 12.6 mm length. 7. Distribution of *Chondropoma bellavittatum* new species. Map Google™ Earth Pro. Image Landsat. ©2105 Google. Data: SIO, NOAA, US Navy, NGA, GEBCO.

strongly indented, almost channeled. Suture smooth to minutely serrate; no sutural tufts present. Aperture teardrop-shaped, lip double. Complete inner lip fused to outer lip, not well-defined. Outer lip expanded, except much narrower facing umbilicus, widest anteriorly, lamellar on umbilical or medial side, smooth on the lateral side, produced into small, wide auricle at posterior border. Outer lip narrowly attached to previous whorl. Umbilicus minute and compressed. Base color grey to white. Patterned with ca. 12 narrow, interrupted, dark brown spiral bands, which cease at growth stoppage marks; length of brown coloration on bands varying from band to band between long streaks and short dashes. Specimens rarely lacking bands. Aperture and lips white, brown bands often continuous across both faces of outer lip but only apparent on lateral side. Operculum paucispiral with fine, granular, calcareous deposit. Radula and anatomy unknown.

Type Material: Holotype, Florida Museum of Natural History (UF) 33135, 12.9 mm length. Paratype 1,

UF 33135, 15.4 mm length. Paratype 2, UF 33135, 16.5 mm length. Paratype 3, UF 33135, 14.2 mm length. Paratype 4 UF 33135, 17.5 mm length.

Type Locality: 1 km E of Baie-de-Henne, Department Nord Ouest, Haiti, ca. 19.6611° N, –73.2041° W.

Other Material Examined: Haiti: UF 33135 (60 specimens), 1 km E of Baie-de-Henne, Department Nord Ouest; UF 33104 (88 specimens), 5 km WNW of Anse-Rouge, Department Artibonite; UF 33099 (85 specimens), 60 m, 1 km W of Petit Paradis, Department Artibonite; UF 31992 (49 specimens), 100 m, 3 km SE of Montrois, Department Nord Ouest [not found]; UF 32651 (3 specimens), W side of Etang Bois Neuf, 14 km S of Saint-Marc, Department Artibonite; UF 32722 (38 specimens), 10 km ESE of Saint-Marc, Department Artibonite.

Distribution: Specimens described here are from the region of Baie-de-Henne, Anse-Rouge, and Saint-Marc.

Bartsch (1946) also listed the area of Arcahaie. Based on museum records, this species ranges along the coastal western slopes of the Massif du Nord Ouest and the Chaîne des Matheux on nearly the entire western side of the northern peninsula (Figure 7). This is a fairly wide range for the otherwise narrowly endemic annulariids seen in Hispaniola.

Habitat: Specimens were locally common on limestone ridges in xeric areas with cacti.

Variation in Specimens: The northern populations differ from those in the south in having more obsolete sculpture on the final whorl and having the spiral brown bands continue onto both faces of the outer lip; the outer lip is white in the southern specimens. The two populations are separated by a wide river valley, the Plaine de l'Artibonite, and they may be found to constitute two subspecies when soft tissue for phylogenetic material becomes available.

Comparison with Other Species: The color pattern and overall shell shape are seen in several superficially similar Hispaniolan species, particularly with members of *Sallepoma* Bartsch, 1946. Those species differ in the strong axial sculpture and near lack of spiral sculpture, and in having a pseudolamellate operculum composed of a heavily calcified, raised plate parallel to the cartilaginous base.

Remarks: Of the 323 specimens, both adult and juvenile, only a single individual (an adult) retained a protoconch (Figure 6). Decollation apparently happens before the adult stage is reached. Numerous specimens exhibited a small circular bore hole in the final whorl, presumably made by the predaceous larvae of lampyrid or elaterid (Drilini) beetles.

Etymology: Latin *bellus*, beautiful + *L. vittatus*, decorated with a ribbon. The genus-name root *-poma* is neuter.

ACKNOWLEDGMENTS

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LITERATURE CITED

- Bartsch, P. 1946. The operculate land mollusks of the family Annulariidae of the island of Hispaniola and the Bahama Archipelago. Bulletin of the U.S. National Museum 192: 264 pp., 38 pls.
- Lamarck, J.B.P.A. de M. de. 1822. Histoire naturelle des animaux sans vertèbres, présentant les caractères généraux et particuliers de ces animaux, leur distribution, leurs classes, leurs familles, leurs genres, et la citation des principales espèces qui s'y rapportent; précédée d'une introduction offrant la détermination des caractères essentiels de l'animal, sa distinction du végétal et des autres corps naturels; enfin, l'exposition des principes fondamentaux de la zoologie. Tome sixième. Deuxième partie. Chez l'auteur, au jardin du Roi, 232 pp.
- Mermod, G. 1952. Les types de la collection Lamarck au Muséum de Genève. Mollusques vivants, III. Revue Suisse de Zoologie 59(2): 24–97.
- Pfeiffer, L. 1862. Bemerkungen zu den beschriebenen Arten. Malakozoologische Blätter 9: 91–97.
- Reeve, L.A. 1863. Monograph of the genus *Chondropoma*. *Conchologica Iconica* 14. Reeve & Co., London [pls. 1–8 + text, Jan. 1863; pls. 9–11 + text, Feb. 1863].
- Weinland, D.F. 1880. Zur Molluskenfauna von Haiti. Jahrbücher der Deutschen Malakozoologischen Gesellschaft nebst Nachrichtenblatt 7(4): 338–378, pl. 12.